

Table 1. Apatite fission track age and kinetic parameter data, East MacKay I-77 sample.

¹ Grain No.	² Auto-scan No.	N _s	³ N _i	⁴ Quads	U (ppm)	Measured CI (wt%)	Measured CI (apfu)	⁵ FT age (Ma)	⁶ Meas. Dpar (μm)	⁷ Corr. Dpar (μm)	⁸ Calc. OH (apfu)	⁹ r _{mro}	¹⁰ Calc. Dpar (μm)	¹⁰ Calc. CI (apfu)	Comment
young outlier age (reset or caved?)															
1	2	41	172	80	12	-	-	48.3 ± 8.5	1.53	1.61	-	-	-	-	mt#2
kinetic population #1															
2	19	10	37.77 ^a	40	5	0.0128	0.0036	53.6 ± 19.1	1.48	1.56	0.0935	0.8364	1.79	0.0112	mt#3
3	1	13	29.82 ^a	12	14	0.0191	0.0053	88.0 ± 29.3	1.61	1.70	0.0974	0.8222	1.92	0.0507	mt#3
4	8	15	43.73 ^a	4	60	0.0203	0.0058	69.3 ± 20.8	1.72	1.80	0.1197	0.8392	1.76	0.0032	mt#3
5	1	27	55	50	6	0.0699	0.0199	99.0 ± 23.4	1.55	1.62	1.0812	0.7594	2.38	0.1943	mt#1
6	7	6	9	20	2	0.0773	0.0217	134.1 ± 70.8	1.98	2.09	1.2022	0.8037	2.07	0.0977	mt#1
7	2	11	28.82 ^a	12	13	0.0927	0.0257	77.1 ± 27.4	1.42	1.49	0.0694	0.8333	1.82	0.0201	mt#3
8	6	18	36.78 ^a	12	17	0.1107	0.0310	98.7 ± 28.5	1.15	1.21	0.0000	0.8254	1.89	0.0422	len grn 6, mt#3
9	24	12	34.79 ^a	25	8	0.1167	0.0323	69.7 ± 23.4	1.46	1.53	0.0000	0.7953	2.13	0.1176	mt#3
10	39	41	72.56 ^a	6	66	0.1686	0.0466	113.8 ± 22.4	1.61	1.70	0.4489	0.8168	1.96	0.0648	len grn 39, mt#3
11	8	5	14	24	3	0.1710	0.0483	72.2 ± 37.7	2.03	2.14	1.0426	0.7299	2.56	0.2492	mt#1
12	43	16	15.90 ^a	12	7	0.2709	0.0760	201.3 ± 71.3	1.77	1.86	0.1987	0.8239	1.90	0.0461	mt#3
13	7	8	11.93 ^a	12	5	0.2974	0.0838	134.9 ± 61.7	1.74	1.82	0.3524	0.7707	2.31	0.1715	mt#3
14	13	6	14	15	5	0.3242	0.0931	86.5 ± 42.3	1.54	1.62	0.7301	0.7549	2.41	0.2031	mt#1
15	5	30	70.57 ^a	32	12	0.3529	0.0979	85.8 ± 18.8	1.62	1.70	0.2487	0.7614	2.37	0.1904	len grn 5, mt#3
16	16	8	14.91 ^a	10	8	0.3559	0.0987	108.2 ± 47.4	2.42	2.55	0.9539	0.7124	2.66	0.2791	mt#3
17	11	19	28.82 ^a	16	10	0.3658	0.1044	132.6 ± 39.3	1.84	1.94	1.0355	0.7752	2.28	0.1621	mt#3
18	11	24	59	24	13	0.3769	0.1082	82.2 ± 20.0	1.93	2.02	0.5446	0.7298	2.56	0.2494	mt#1
19	3	81	204	50	22	0.3902	0.1118	80.2 ± 10.7	1.61	1.70	0.7408	0.7089	2.68	0.2848	len grn 3, mt # 2
20	3	12	25	30	5	0.4078	0.1167	96.8 ± 34.1	1.79	1.89	0.9129	0.7080	2.68	0.2863	len grn 3, mt#1
21	10	3	8.95 ^a	15	3	0.4330	0.1206	67.8 ± 45.2	2.21	2.32	0.8708	0.6891	2.78	0.3160	3 pits, mt#3
90.4 ± 6.1^b															
kinetic population #2															
22	44	22	16.90 ^a	10	9	0.4680	0.1276	259.4 ± 84	1.93	2.03	0.0284	0.7747	2.28	0.1632	mt#3
23	17	12	12.92 ^a	12	6	0.4683	0.1345	186.1 ± 74.6	1.86	1.96	0.5508	0.7038	2.70	0.2930	mt#3
24	37	20	15.90 ^a	10	9	0.4938	0.1361	250.7 ± 84.3	2.18	2.29	0.6033	0.7612	2.37	0.1908	len grn 37, mt#3
25	3	7	4.97 ^a	9	3	0.4461	0.1366	280.1 ± 164.2	2.01	2.12	0.5746	0.7391	2.51	0.2327	len grn 3, mt#3
26	23	23	31.81 ^a	12	14	0.5149	0.1467	145.3 ± 39.9	2.08	2.18	0.4395	0.7671	2.33	0.1790	mt#3
27	48	34	28.82 ^a	6	26	0.5483	0.1549	235.4 ± 59.8	1.99	2.09	0.5122	0.7852	2.21	0.1404	len grn 48, mt#3
28	22	24	19.88 ^a	15	7	0.5586	0.1887	240.8 ± 73.2	2.24	2.36	0.2746	0.7034	2.71	0.2936	mt#3
29	15	16	16.90 ^a	15	6	0.8091	0.2294	189.7 ± 66.2	1.82	1.91	0.5261	0.7308	2.56	0.2476	mt#3
30	12	21	20.87 ^a	16	7	0.7667	0.2344	201.3 ± 62.3	1.97	2.07	0.5608	0.6984	2.73	0.3016	mt#3
31	33	17	10.93 ^a	9	7	0.8360	0.2539	308.5 ± 119.6	2.19	2.30	0.6774	0.6942	2.75	0.3080	mt#3
32	20	24	17.89 ^a	9	11	1.7202	0.5877	267.1 ± 83.5	3.02	3.18	0.7122	0.4670	3.61	0.5718	len grn 20, mt#3
222.2 ± 22.5^c															
high CI outlier ages (caved?)															
33	18	11	40.75 ^a	15	15	0.6750	0.1876	54.6 ± 18.6	2.49	2.62	0.5387	0.7323	2.55	0.2449	mt#3
34	27	4	10.93 ^a	35	2	1.1940	0.3370	73.9 ± 43.2	2.49	2.62	0.6061	0.6684	2.88	0.3465	mt#3
35	2	10	30	24	7	1.2995	0.3791	67.4 ± 24.7	2.54	2.67	0.9001	0.6071	3.14	0.4270	len grn 2, mt#1

¹All analyses by A. Grist with zeta calibration factor, 353.5±7.1, relative to CN5 glass dosimeter (N₄₁₂=4281, ρ_{d12}=1.15x10⁶ for age mounts 1 and 2; N_{d3}=5387, ρ_{d3}=1.157x10⁶ for age mount 3)

²Autoscan number used for locating grains for microprobe measurements

³Number of induced tracks for grains from age mount 3 (denoted by a) were adjusted to compensate for different irradiation conditions so that all counts could be pooled (N_i × ρ_{d12}/ρ_{d3})

⁴Number of quadrants (each of area, 9.31 × 10⁻⁷ cm²) used on counting grid

⁵Age ± one standard deviation; pooled ages, b - pass χ² test, Q = 0.76 and c - pass χ² test, Q = 0.97

⁶Average etch figure size parallel to c-axis measured by A. Grist (1.74 μm for Durango apatite)

⁷Corrected by reference to Carlson *et al.* (1999) Durango apatite Dpar value (1.83 μm)

⁸OH concentration calculated using microprobe data (Table 3)

⁹Kinetic parameter calculated using full probe data (Table 3) in equation 6 of Carlson *et al.* (1999)

¹⁰Calculated using r_{mro} value and equations 4a,b of Ketcham *et al.* (2000)